



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/420,965	10/20/1999	ELLEN M. HEATH	1074.010US1	3488

7590 02/12/2004

Daniel J. Polglaze
Fogg Slifer & Polglaze, P.A.
P.O. Box 581009
Minneapolis, MN 55458-1009

EXAMINER

GORDON, BRIAN R

ART UNIT	PAPER NUMBER
----------	--------------

1743

DATE MAILED: 02/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/420,965	Applicant(s) HEATH ET AL.	
	Examiner Brian R. Gordon	Art Unit 1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11-12-03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 12, 18-22 and 40-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12, 18-22, 40-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 22 January 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 12, 2003 has been entered.

Response to Arguments

2. Applicant's arguments, see remarks and amendment, filed November 12, 2003, with respect to the 102 rejection(s) of claim(s) 1, 4-5, 8, 12 under Konefal et al. have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Ryder, Mar, and Floyd.

3. Applicant's arguments as directed to the 102 and 103 rejections of claims 18-22, and 42-47 respectively, over Konefal et al. or in view of Long, Jr. have been fully considered but they are not persuasive. It is well known in the art that the degree of rotation to securely close a threaded container is dependent upon the thread density and the number of threads present on the container. The vessel of Konefal et al. as seen in Figures 35 and 36 has one thread which inherently implies that it may only require a slight turn for the cap to be secured to the vessel.

Claim Interpretation

Claims 1, 7-9, are 44-45, appear to be structure claims however each claim includes a "wherein" clause that is directed to the use of the cap in vessel, more specifically how the cap is threaded on and off of the vessel. Claims 7-9 are directed to steps of how the cap is secured the first time and removed. These limitations are considered as intended use of the cap and vessel.

It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

As such, the examiner has determined that any prior art meeting the limitations of a device comprising the structure of the cap and vessel as recited in the instant claims inherently meets the limitation of the intended use claims for the devices of the prior art may be used as so desired.

Claim 12 as presently drafted appears to be a process claim or a product by process claim that requires the device to be manufactured by a particular process. If applicant intends for the claim to be as such, the examiner would require a restriction requirement of the claim for the device may be manufactured by other processes. However at this time the examiner has addressed the claim as a structure limitation that requires the cap and vessel to be comprised of polypropylene.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1743

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claim 44-47 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Konefal et al., US 6,039,195.

Konefal et al. disclose a child resistant package which includes a container (vessel) having an open end and multiple threads on the external surface of the container adjacent the upper end. A closure (cap) having a base wall and a peripheral skirt has an inner surface formed with single or multiple threads corresponding in number to the multiple threads on the container for engaging the threads on the container. A deflectable release element is formed integrally on the container. The release element includes an integral axially deflectable lug extending upwardly toward the open end of the container. The closure has at least one locking lug on the skirt of the closure, the number of locking lugs preferably corresponding to the number of threads on the container and closure.

The closure 26 includes a second annular skirt 40 extending axially downwardly from the lower end of the skirt 36 and connected thereto by a second annular radial flange 42 such that the skirt 40 is spaced from the thread 38. A single locking lug or stop 44 extends 1 5 radially inwardly from the inner surface of skirt 40.

In FIGS. 7 and 10, a deflectable tab or release element 50 is mounted on the vial 20 at an interruption or space in the flange 24. The release element 50 is connected to the vial 20 by circumferentially spaced horizontal flexible and resilient arms 52 which are attached to the vial 20 at one end and to the release element 50 at the other end such that the release element is spaced from the vial. The deflectable release element 50 has a radial width and axial thickness which is sufficient to make the element convenient for an adult to remove the closure from the container by depressing the element 50 yet difficult for a child to open the package. A single integral cantilever lug 54 (vessel flange) extends axially upwardly from the release element 50. The cantilever lug 54 is axially deflectable upon the application of the closure and is mounted in a cantilever manner on the release element 50 and includes an axial stop surface 56 which is inclined at a small acute angle to an axial radial plane complementary to the angle of surface 46 on locking lug 44 (cap flange).

Konefal et al. teach that the vessel is sealed or secured when complimentary lugs (flanges) 44 and 54 (which in the figures appear to be substantially square or rectangular) are aligned.

The plastic container 20 is preferably made of homopolymer polypropylene and the closure 26 is preferably made of high density polyethylene. Other container materials which can be used, depending on the nature of the contents, such as copolymer polypropylene, other polyethylenes, and PET. Other closure materials may also be used depending on the nature of the contents of the containers.

It is well known in the art that the degree of rotation to securely close a threaded container is dependent upon the thread density and the number of threads present on the container. The vessel of Konefal et al. as seen in Figures 35 and 36 has one thread which inherently implies that it may only take require a slight turn of the cap to be secured to the vessel.

2. Claims 1-3, 18, 40-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Ryder US 4,579,823.

Ryder discloses a sterilization indicator device comprises a receptacle for containing a spore disc and a sealed ampule of culture medium. A closure is threaded onto the receptacle and cooperates with the receptacle to provide a passageway for the sterilization gases to reach the spore disc.

The device comprises a receptacle having a chamber and an opening into the chamber, a source of microorganisms within said chamber, a frangible closed ampule of liquid culture medium in said chamber, a closure for said opening and having a first position in which said closure has a part thereof juxtaposed with said ampule, said closure having a second position in which said closure engages and fractures said ampule to release the culture medium into contact with said source of microorganisms and moves said flag to a second position, cooperating means on said receptacle and closure for permitting relative movement of said receptacle and closure to shift said closure from its first position to its second position.

The receptacle 2 includes a bottom wall or base 4 and a surrounding sidewall 6. The sidewall 6 is formed with an external thread 8 which is interrupted at two zones

10,10 one hundred eighty degrees apart and at which the sidewall 6 may be flattened, for purposes presently more fully appearing.

An annular **flange** 12 projects radially outwardly of the junction of the bottom wall 4 and sidewall 6, and the flange 12 includes a further radial projection 14 in the region of one of the zones 10,10 (establishing 4 disjointed threads).

Integrally provided on the external surface of the sidewall 34 of the cap is a generally triangular indicator projection 50 (cap flange). The cap or closure 30 may be axially pushed without rotation onto the receptacle, the threads 8, 36 yielding elastically to permit such relative movement of the closure and receptacle. Alternatively, the closure may be threaded partially onto the receptacle and then axially shifted without rotation to snap past a thread turn.

During the sterilization process, the sterilizing medium will flow through the passageways at the zones 10,10 and into the chamber 22. Upon removal of the device 1 from the sterilizer the cap is immediately turned relative to the receptacle to shatter the ampule 26 whereupon the cap will be shifted to the position shown in FIGS. 5-8.

As seen particularly in Figure 6, the projection 50 and 14 are aligned.

3. Claims 1, 4-5, 18, and 40-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Mar US 4,512,484.

Mar discloses a locking screw cap for sealing a wide variety of containers, such as medicine bottles, bottles containing hazardous liquids, and other containers where it is desired to prevent access by young children.

The container 10 having a threaded opening 12 is illustrated. The container may hold a wide variety of substances such as medicines, hazardous liquids including bleaches, cleaning fluids, toxic chemicals, and other items commonly found in the household, all of which should not fall into the hands of young children. The container may be formed from a wide variety of substances, including metals, plastics and glass.

One or more lugs 14 (vessel flange) are formed in the body of the container 10 adjacent the threaded opening 12. In the embodiment illustrated, three spaced-apart lugs 14 define a pair of recesses 16 there between. Aside from having the lugs 14, the container 10 is a conventional screw-top container as commonly found in the household.

A cap 20 includes a cylindrical side wall 22 which defines a threaded lip which engages the threaded opening 12 on the container 10. Thus, in the absence of the locking mechanism discussed here below, the cap 20 may be screwed off and on the threaded opening 12 of the container 10 to form a tight seal and protect the contents of the container from the outside.

A bracket 26 (cap flange) projects outward from the threaded lip 22 of the cap 20 and defines a channel 28 (FIG. 1) therethrough. A bar 30 extends across the front face of the bracket 26 to complete the enclosure

The threads on both the opening 12 and the cap 20 are formed so that the bracket 26 lies substantially above the lugs 14 when the cap is tightly screwed on.

4. Claims 1, 18, 40, 42, and 44-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Floyd US 4,904,450.

Floyd discloses vessel assembly 10 includes a cylindrical outer casement 11 molded of polyetherimide resins. This material is microwave transparent. Threads 12 are molded into the top edge of casement 11 as are gripping lugs 13 (non-circular cap flange having upper and lower edges). Casement 11 includes an access opening 18 in the bottom wall into which can be inserted a finger or other object to push out the contents of casement 11. A cylindrical casement cap 14, also molded of polyetherimide resins, is provided with internal threads 15 (see FIG. 4) which mate with threads 12 of outer casement 11 so that **cap 14 may be threaded onto casement 11 to a desired tightness (implicating the cap may be rotated as desired to secure and remove).** Cap 14 includes a centrally-formed opening 16 and molded gripping lugs 17 (non-circular vessel flange having upper and lower edges).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

13. Claims 44-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konefal et al., in view of Long Jr.

Konefal et al., US 6,039,195 does not disclose that the cap and container have disjointed threads.

Long Jr. discloses a snap-on, screw-off closure and container that have multiple discontinuous mating threads. As it appears in the figures each thread extends about 180 degrees around the vessel neck and each thread starts in a location about 90 degrees away from an adjacent thread. The device is manufactured from plastic and more preferably a high density plastic suitable for blow molding of the thread finish. The molding process makes it obvious that the design and location of the threads may be altered as so desired.

Helically extending between first end 14 and the second end 16 of the annular wall 12 are an appropriate number of threads to permit snap-on or screw-on application, preferably eight or nine threads 24 terminating at points 26 and 27 proximate to the first end 14 and second end 16 of annular wall 12, respectively. Preferably, threads 24 are helically spaced in a continuous relationship as shown in FIG. 1 but threads 24 can alternately be discontinuous and can take on any cross-sectional profile suitable for mating with threads 43 on the closure 30 during snap and screw-on application of the closure 30 to the neck finish 10 (column 3, lines 57-67).

It would have been obvious that if the threads of the cap and vessel are manufactured to a certain same length the securing of the vessel will be accomplished when the cap is turned in the direction of applying the cap that certain distance and removing the cap would occur when the cap is turned in the opposite direction that same certain length.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the device of Konefal et al., to include the principles of Long Jr. et al in order develop a closure which would indicate tampering of the seal.

The examiner asserts that it would have been obvious to one of the ordinary skill in the art to modify the device by employing the disjointed threaded formation of Long Jr., for it has been disclosed that both single and multiple threads are conventional and well-known in the art for providing a secure attachment of a cap to a vessel. As to the number of threads and the spacing on the cap, it has been disclosed (specification page 12 and cited references, Folchini, Collins, Edwards, and Edwards et al.) that "four-start" threads are also conventional and well known in the art. It is obvious that the spacing of the threads depends on the total number of the threads; therefore, if four threads are to be equally spaced around a 360 degrees perimeter, then each thread would obviously be spaced 90 degrees from an adjacent thread. Although Long Jr. discloses the use of 8 or 9 equally spaced threads, this does not preclude the use of a conventional "four-start" thread configuration to provide suitable closure means for a cap and vessel assembly. The examiner hereby asserts that the employment of a well-known, "conventional" thread format does not distinguish the claimed invention over the prior art.

As to the method claims 46-47, it would have been obvious that one of the ordinary skill in the art would have recognized that the caps are secured onto the container by placing the cap on the opening and turning the cap in a given direction and

removing the cap to remove the contents can be accomplished by turning the cap in the opposite direction and the method can be repeated as so desired.

5. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ryder or Mar.

Neither Ryder nor Mar discloses the particular steps of removing and resealing the caps of the devices.

It would have been obvious to one of ordinary skill in the art at the time of the invention to recognize that the caps of Ryder and Mar may be removed by performing unscrewing the caps to access the contents of the container and afterwards reapplying the caps to protect the contents therein.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mar.

Mar does not teach that the device is molded from polypropylene.

It would have been obvious to one of ordinary skill in the art at the time of the invention to recognize that the device may be manufactured from plastic as taught by Mar and more specifically from a plastic as common as polypropylene, for medicine bottles and other containers are manufactured from low cost plastics to allow for disposal purposes.

7. Claims 12 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Floyd.

Floyd does not teach that the device is molded from polypropylene.

It would have been obvious to one of ordinary skill in the art at the time of the invention to recognize that the device may be manufactured from a thermoplastic such

Art Unit: 1743

as polyetherimide as taught by Floyd and a similar thermoplastic such as polypropylene, for medicine bottles and other containers are manufactured from low cost plastics to allow for disposal purposes.

Floyd does not disclose the particular steps of removing and resealing the caps of the devices.

It would have been obvious to one of ordinary skill in the art at the time of the invention to recognize that the cap of Floyd may be removed by performing unscrewing the caps to access the contents of the container and afterwards reapplying the caps to protect the contents therein.

8. Claims 6-9 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mar, as applied to claims 4, 18, and 44 above, further in view of Long Jr.

Mar does not disclose that the cap and container have disjointed threads.

Long Jr. discloses a snap-on, screw-off closure and container that have multiple discontinuous mating threads. As it appears in the figures each thread extends about 180 degrees around the vessel neck and each thread starts in a location about 90 degrees away from an adjacent thread. The device is manufactured from plastic and more preferably a high density plastic suitable for blow molding of the thread finish. The molding process makes it obvious that the design and location of the threads may be altered as so desired.

Helically extending between first end 14 and the second end 16 of the annular wall 12 are an appropriate number of threads to permit snap-on or screw-on application, preferably eight or nine threads 24 terminating at points 26 and 27 proximate to the first

end 14 and second end 16 of annular wall 12, respectively. Preferably, threads 24 are helically spaced in a continuous relationship as shown in FIG. 1 but threads 24 can alternately be discontinuous and can take on any cross-sectional profile suitable for mating with threads 43 on the closure 30 during snap and screw-on application of the closure 30 to the neck finish 10 (column 3, lines 57-67).

It would have been obvious that if the threads of the cap and vessel are manufactured to a certain same length the securing of the vessel will be accomplished when the cap is turned in the direction of applying the cap that certain distance and removing the cap would occur when the cap is turned in the opposite direction that same certain length.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the device of Konefal et al., to include the principles of Long Jr. et al in order develop a closure which would indicate tampering of the seal.

The examiner asserts that it would have been obvious to one of the ordinary skill in the art to modify the device by employing the disjoined threaded formation of Long Jr., for it has been disclosed that both single and multiple threads are conventional and well-known in the art for providing a secure attachment of a cap to a vessel. As to the number of threads and the spacing on the cap, it has been disclosed (specification page 12 and cited references, Folchini, Collins, Edwards, and Edwards et al.) that "four-start" threads are also conventional and well known in the art. It is obvious that the spacing of the threads depends on the total number of the threads; therefore, if four threads are to be equally spaced around a 360 degrees perimeter, then each thread would obviously

be spaced 90 degrees from an adjacent thread. Although Long Jr. discloses the use of 8 or 9 equally spaced threads, this does not preclude the use of a conventional "four-start" thread configuration to provide suitable closure means for a cap and vessel assembly. The examiner hereby asserts that the employment of a well-known, "conventional" thread format does not distinguish the claimed invention over the prior art.

As to the method claims 19-22, it would have been obvious that one of the ordinary skill in the art would have recognized that the caps are secured onto the container by placing the cap on the opening and turning the cap in a given direction and removing the cap to remove the contents can be accomplished by turning the cap in the opposite direction and the method can be repeated as so desired.

Conclusion


9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Luch, Schoo et al., Bietzer et al., Repp et al., Wohlgemuth et al., Molinaro, Ladina et al., Anderson, Wright, Swartzbaugh, and Skiba et al., disclose cap and vessel assemblies.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian R. Gordon whose telephone number is 571-272-1258. The examiner can normally be reached on M-F, with 2nd and 4th F off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

brg


Jill Warden
Supervisory Patent Examiner
Technology Center 1700